Triage

Center of Excellence in Disaster Management
and
Humanitarian Assistance

TRIAGE

to do the **Greatest Good**
for the **Greatest Number**

Dominique Larrey
1766 - 1842

More than just deciding who gets treated first...

Provides for maximum utility of all available resources.

Triage

- Why?
  - Separates out those in need of rapid medical care
  - Decreases the urgent burden
  - Distributes casualties among available resources

Triage

- Triage is a systems process
  - Requires coordination and information
- Tricks of the trade
  - Visual triage at a distance
  - Disrobe
  - Telemedicine
  - All the senses

Triage is a **SYSTEMS Process**

...requiring coordination and information

D elayed

I mmediate

M inimal

E xpectant

C ontaminated

In contrast to the priorities in most routine emergencies...

Efficient response in disasters mandates:

- Triage
- Casualty Distribution

S imple

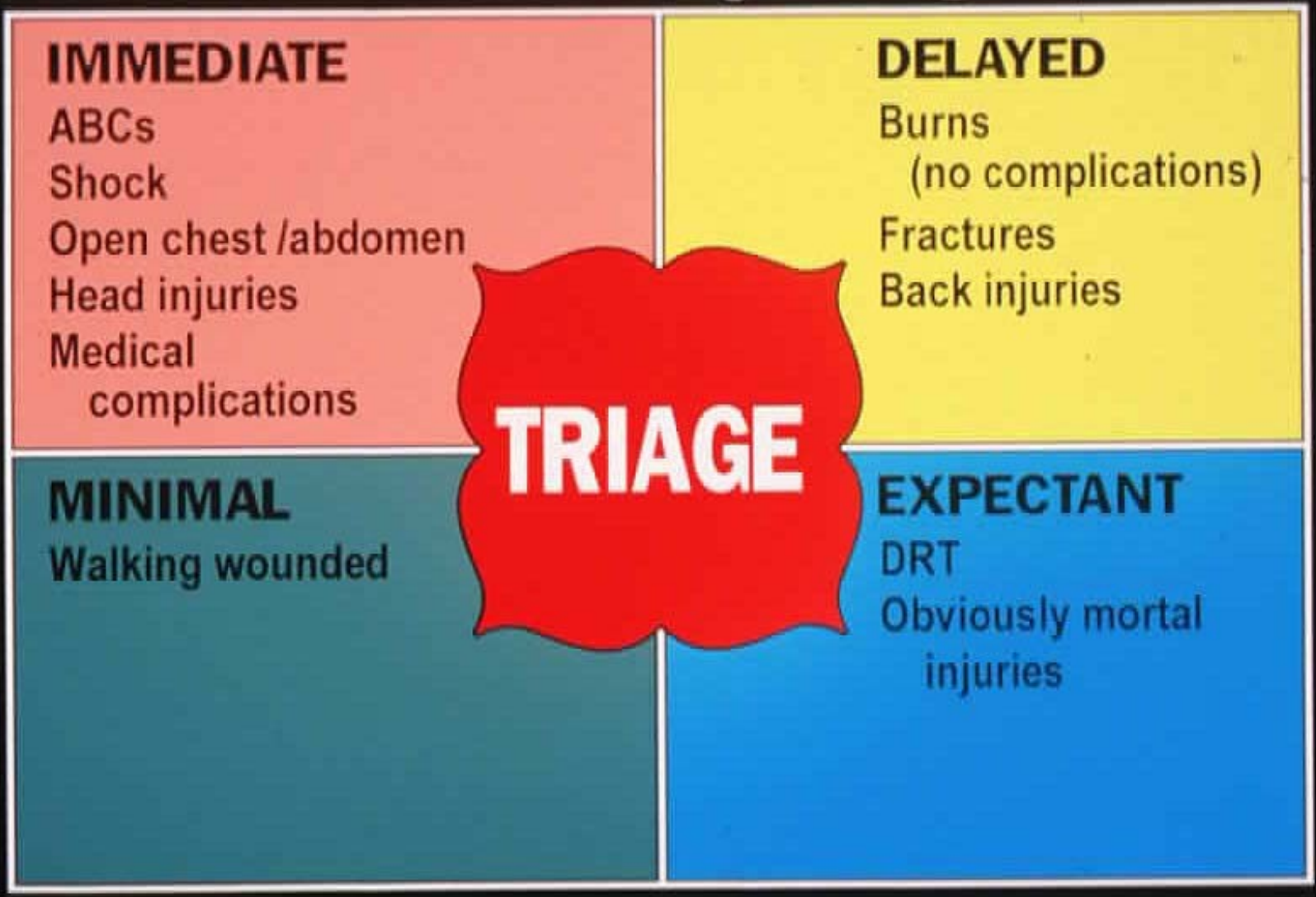
T riage

A nd

R apid

T reatment

Outcome Probability Triage Criteria



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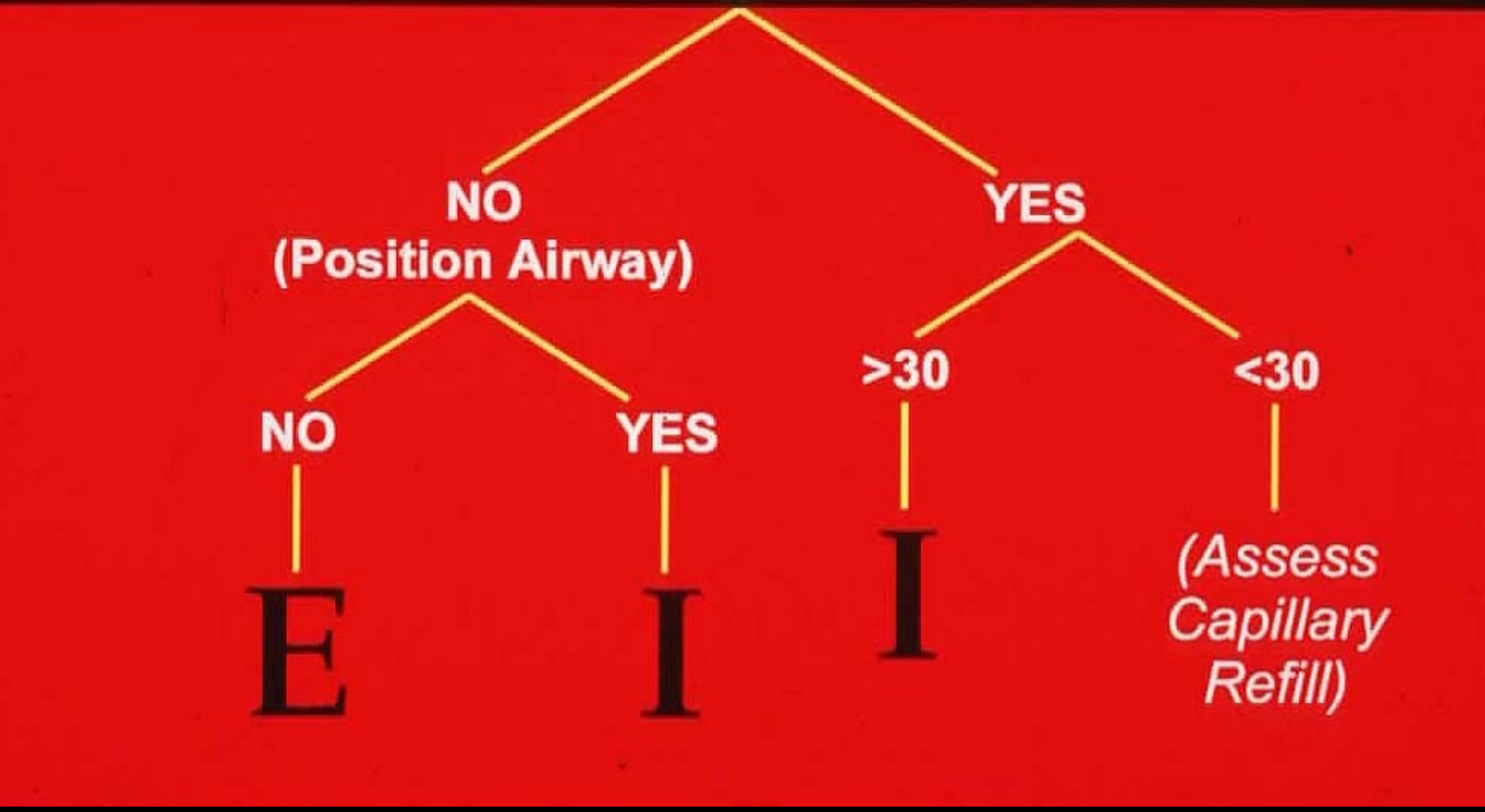
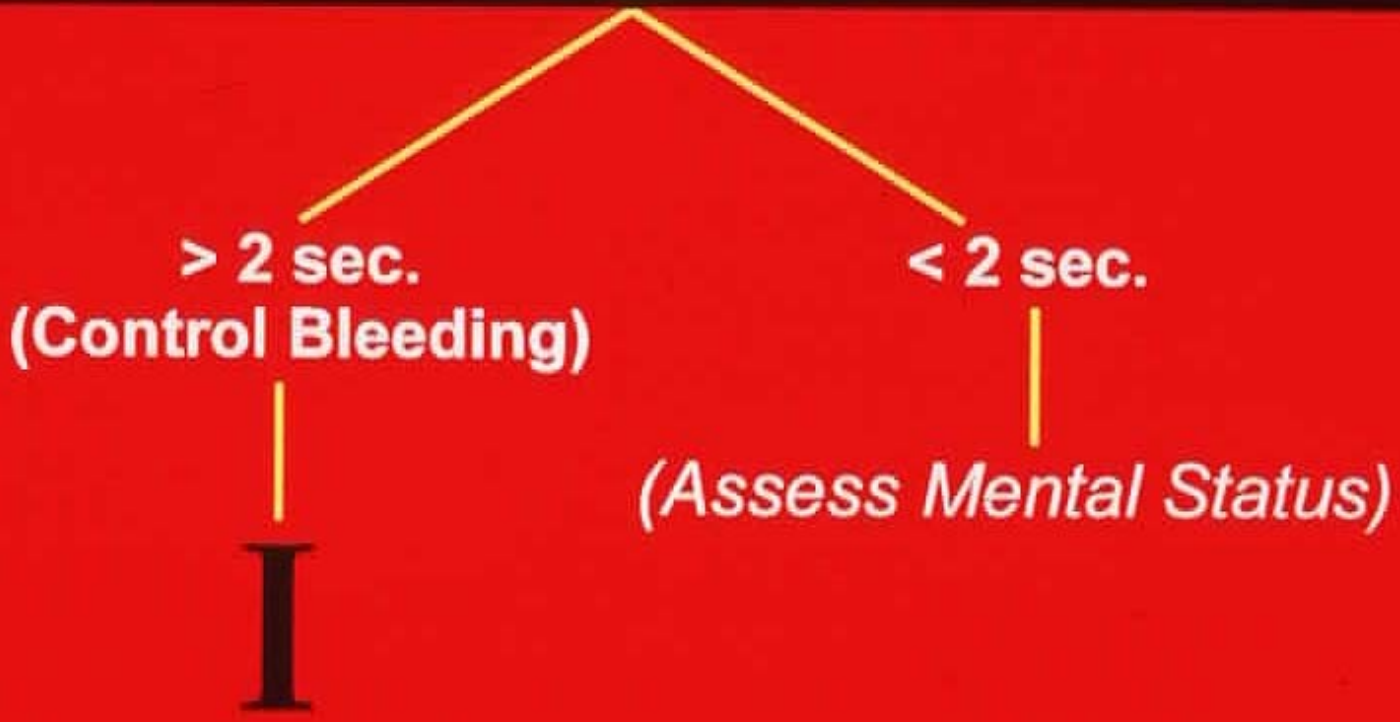
Able to Walk

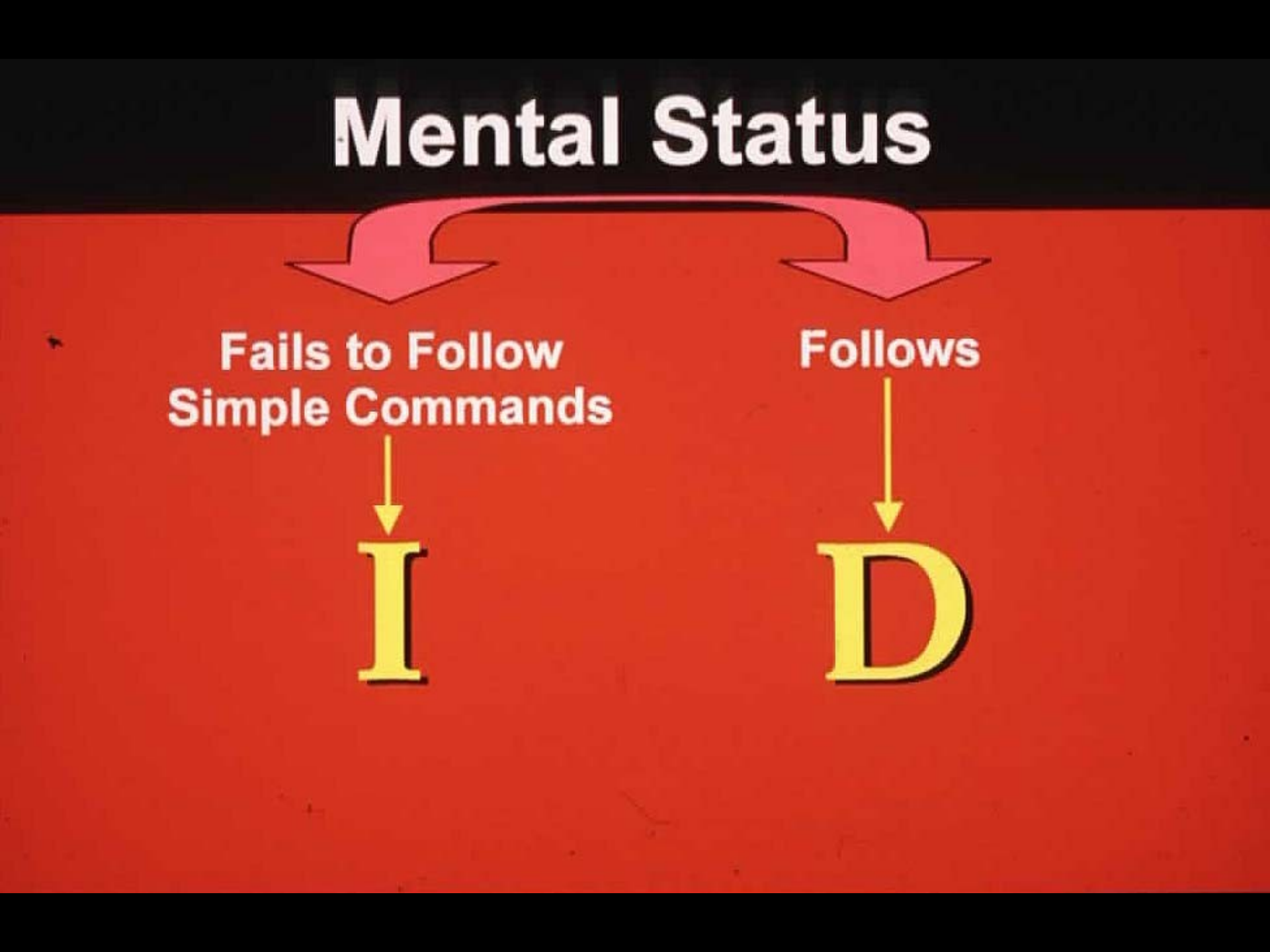
Ventilation



Capillary Refill



Mental Status

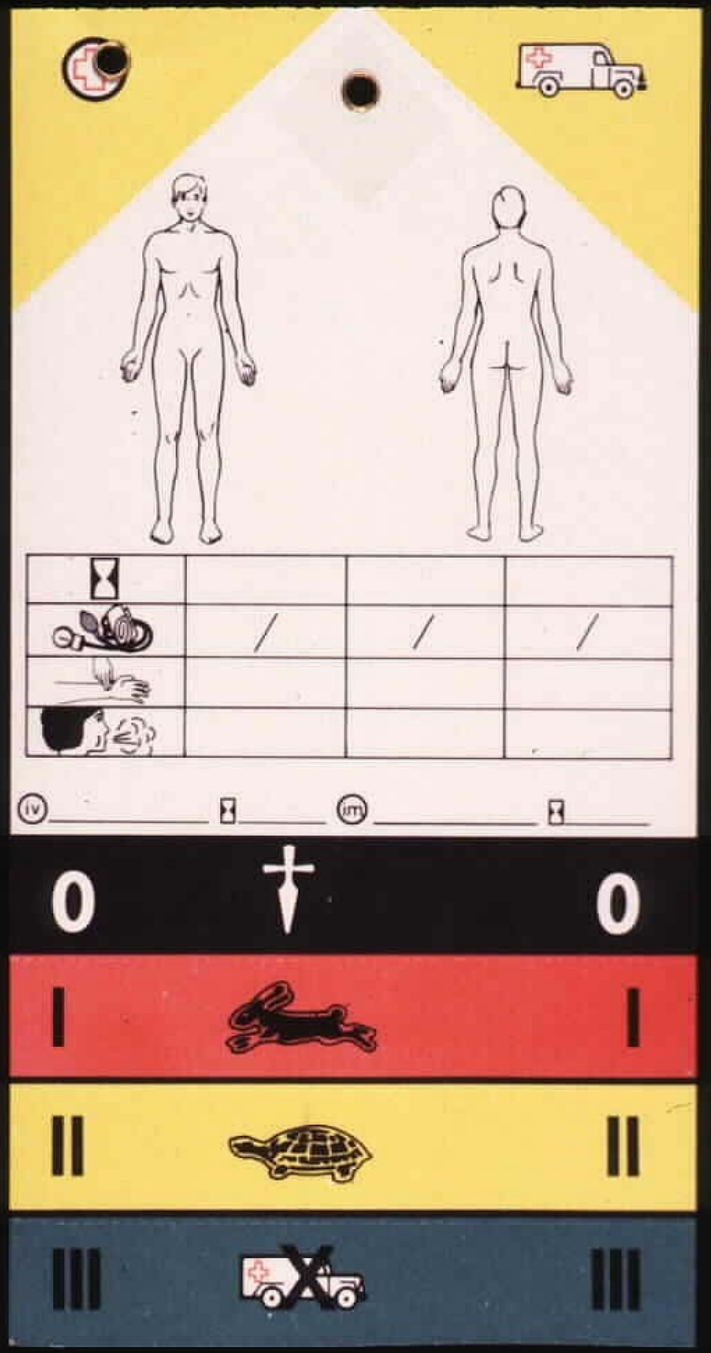


Triage

- Triage Scores
  - Useful in limited casualty domestic disasters
  - Limited sensitivity in mass casualty disasters

Triage

- Rating Scales
  - 2 - 5
  - No single standard method
  - Variations depend on local conditions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II
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III
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Overtriage

- Non-critical victims in immediate treatment priority
- Significant in disasters characterized by minor injuries
- Strains limited resources
- Threatens life-threatening injuries

Triage Efficiency

Mean OVERtriage Rate

Non-critically injured among those hospitalized or evacuated

Mean UNDERtriage Rate

Critically injured among those not hospitalized or evacuated

Triage

- Triage Similarities
  - Traditional triage for trauma
    - Ensures minimal and expectant categories are not included
  - Refugee camp triage
    - Chronic non-risk patients not included except for palliative care

Triage

- Refugee camp triage
  - Rarely have equipment, supplies, personnel, or evacuation capability
  - Inclusion and Exclusion criteria
  - Misinterpretation by refugees and health care workers

Triage

- Triage criteria of selection
  - Inclusion
  - Exclusion

Optimizing Triage Management in Complex Emergencies

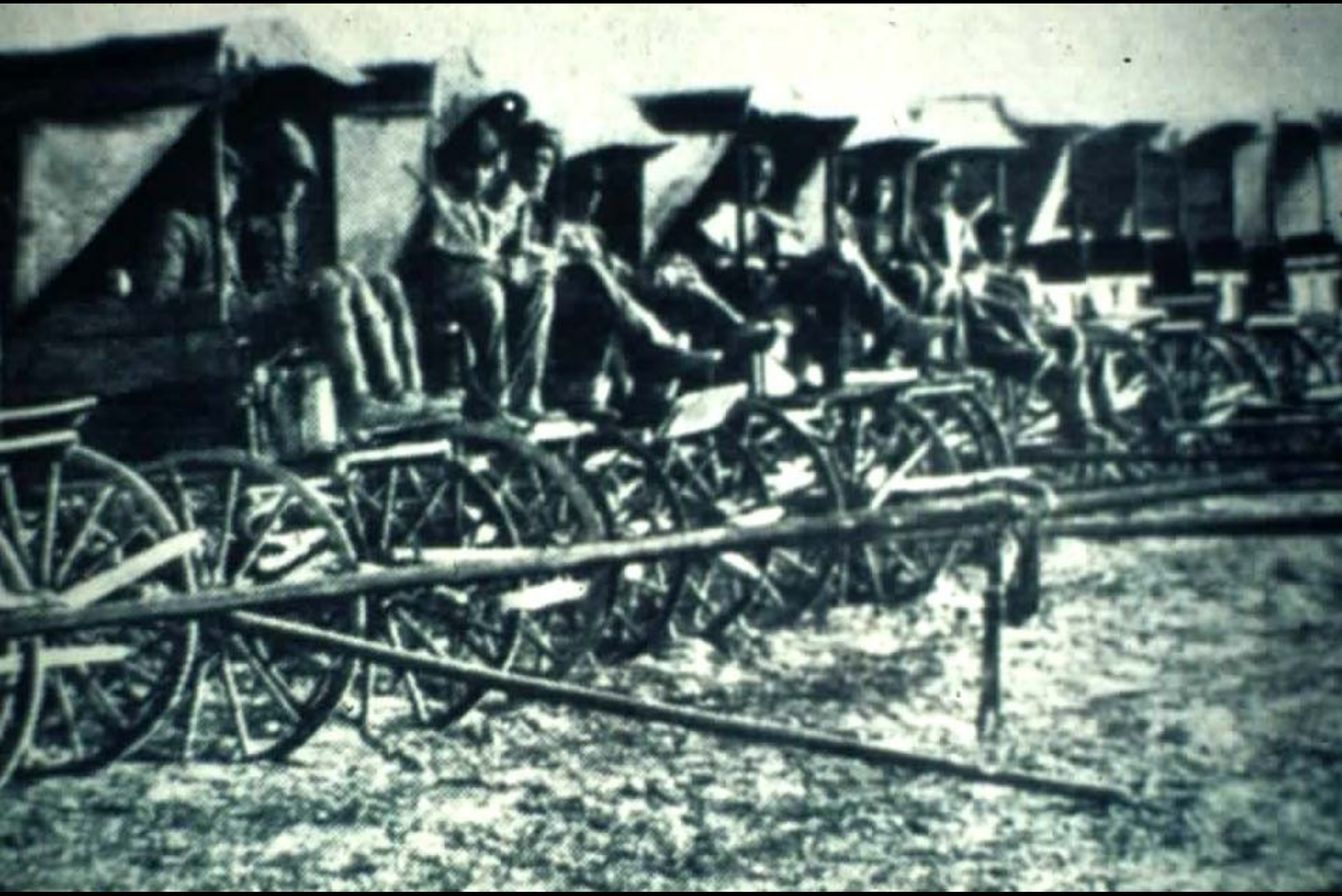
- Focus on first aid
- Stress triage system which best ensures a victim's opportunity to survive
- Stress stabilization

Triage

- Was triage really used?
  - Even when plans exist not always followed

Triage

- Triage Issues
  - Non-local responders
  - Search and Rescue
  - Lack of inter-organizational planning
  - Lack of communications
  - Lack of needs assessment
  - Transport



Triage

- Assumptions
  - Mortality rates unchanged for4 all patient admitted within 6 hours
  - Late deaths (over 6 hours) are preventable
    - » ICRC

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Triage

- Epidemiologic Findings in CHEs
  - Severely injured survive for days/weeks without surgery
  - Appropriate surgical skills may not be available
  - Appropriate surgical skills may not be usable due to security issues

Triage

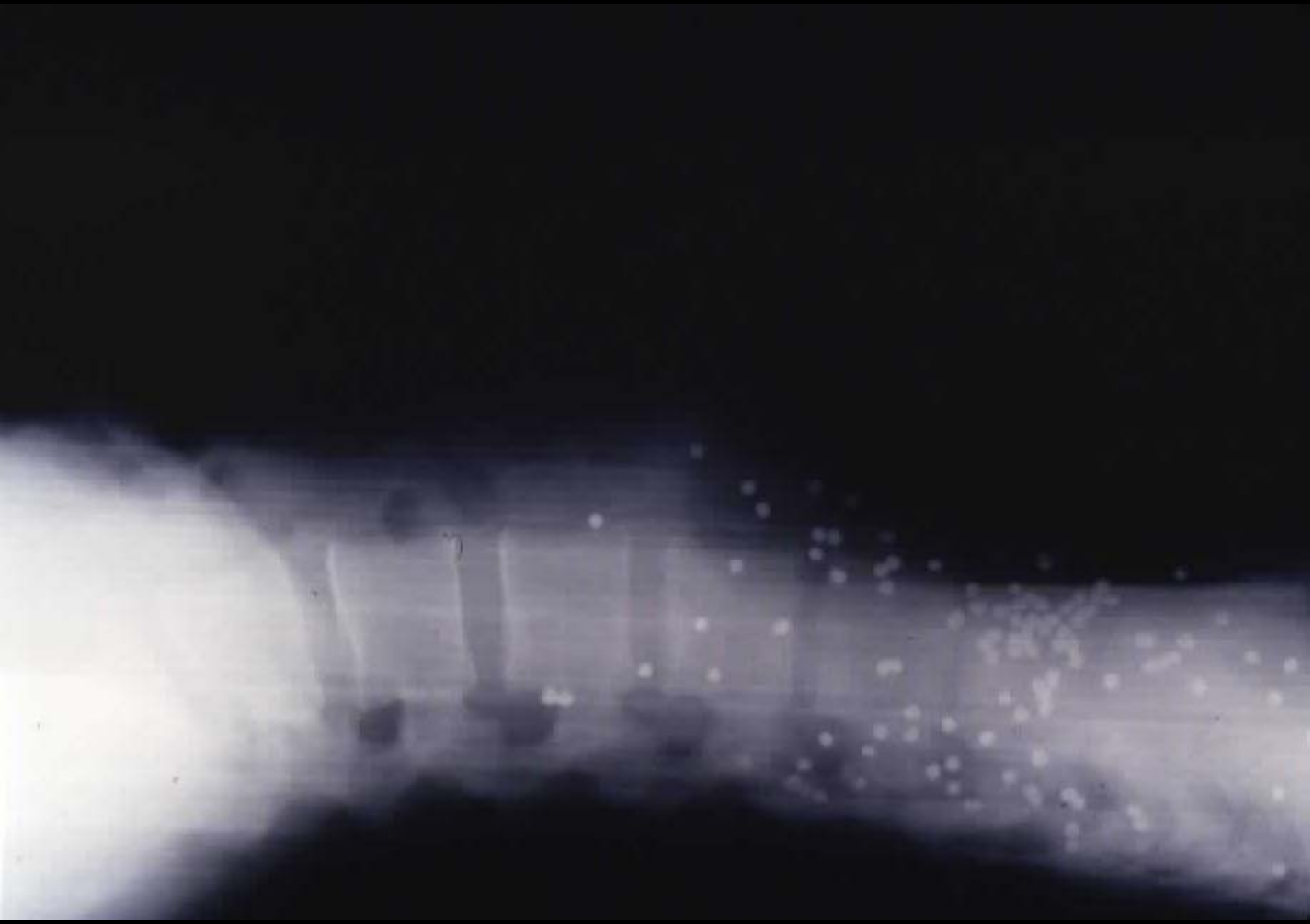
- Decisions to open a surgical facility
  - Optimize First Aid, non-operative management
  - Allow for “nature’s triage”
  - Surgery is a secondary consideration
  - Optimize pain relief for those who will die

Triage

- Lessons Learned
  - Abdominal wounds survived from perforation, not bleeding
  - Low-energy missile abdominal perforations may seal themselves
  - Unrealistic triage increases death rates

Triage

- Abdominal Wounds
  - Most tolerate delay if adequate resuscitation
  - Conservative treatment of low-velocity gunshot wounds
  - Outcome in 1/3 of cases not altered by laparotomy



Triage

- Lessons Learned
  - IVs/Antibiotics buy time
  - Severely injured die without:
    - appropriate resources
    - appropriate nursing
    - organization of hospital infrastructure
  - Chest tubes do NOT require a surgical facility
  - Hopelessly injured die……

Triage

- Quality of survival depends on surgical skills
  - Examples
    - Nerve/major vessel injuries
    - Amputation - incorrect level, indication, technique
    - Unnecessary colostomies

Important to Note

Pediatric considerations...

Triage

- Pediatric Triage issues
  - Up to 80% of civilian casualties
  - Immaturity compounds risks

Triage

- Factors that save lives
  - Early First Aid
    - Airway
    - Bleeding
  - Non-operative management
    - IVs
    - Antibiotics
    - Wound care
    - Splints